A scenic view of Mount Hood, a snow-capped mountain, rising behind a dense forest of evergreen trees. In the foreground, a city skyline is visible, featuring a prominent tall, modern glass skyscraper. The sky is clear and blue.

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Spinal Manipulation and Opioids: Navigating the Current Treatment Landscape



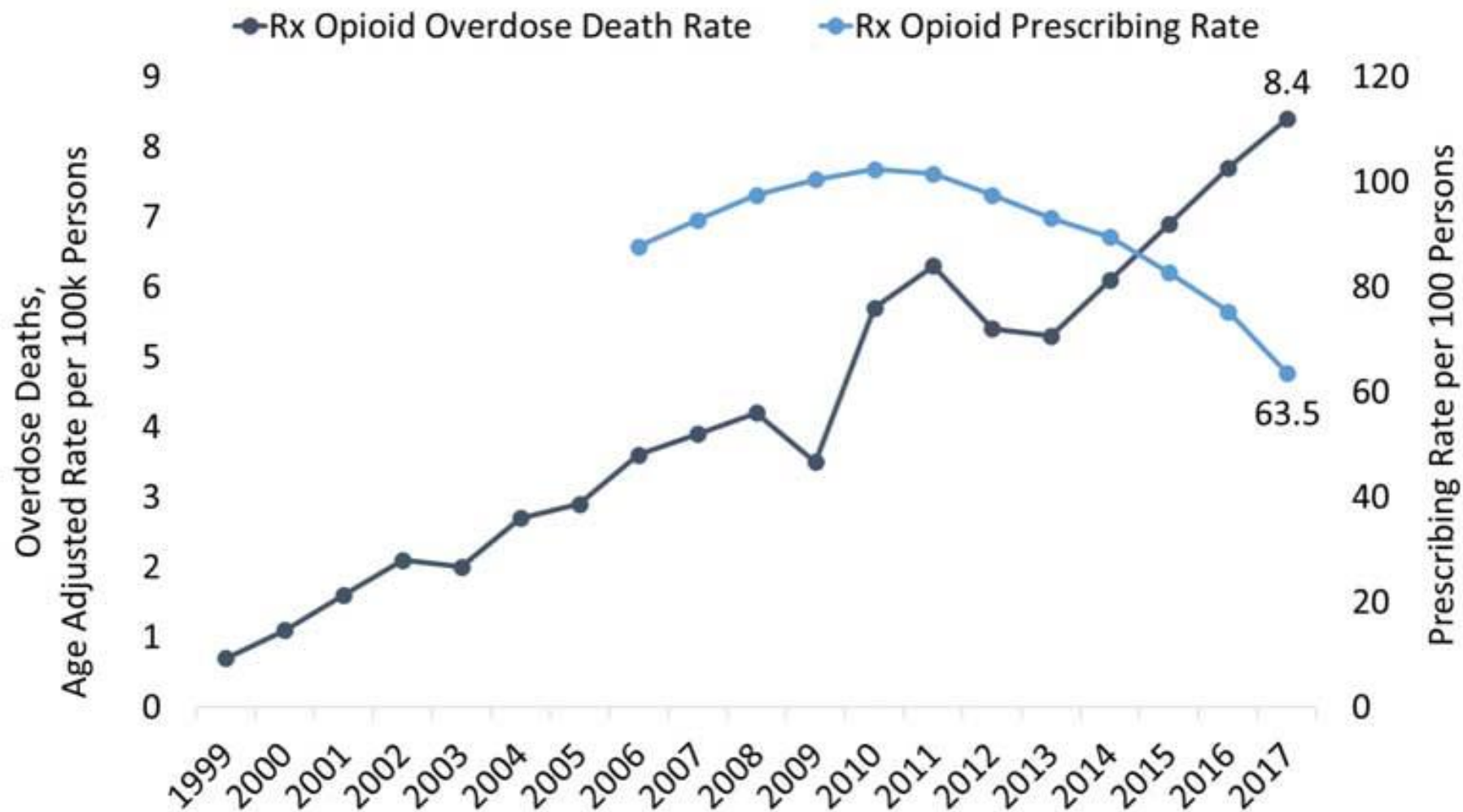
Objectives

- Describe the evidence for low back pain management from the current medical and CAM literature
- Provide examples of interdisciplinary educational opportunities around pain management



In 1999 to improve pain management, the American Pain Society launched the **“Pain as the 5th Vital Sign”** initiative.



It required a pain intensity rating (0 to 10) at all clinical encounters.



The Big Three

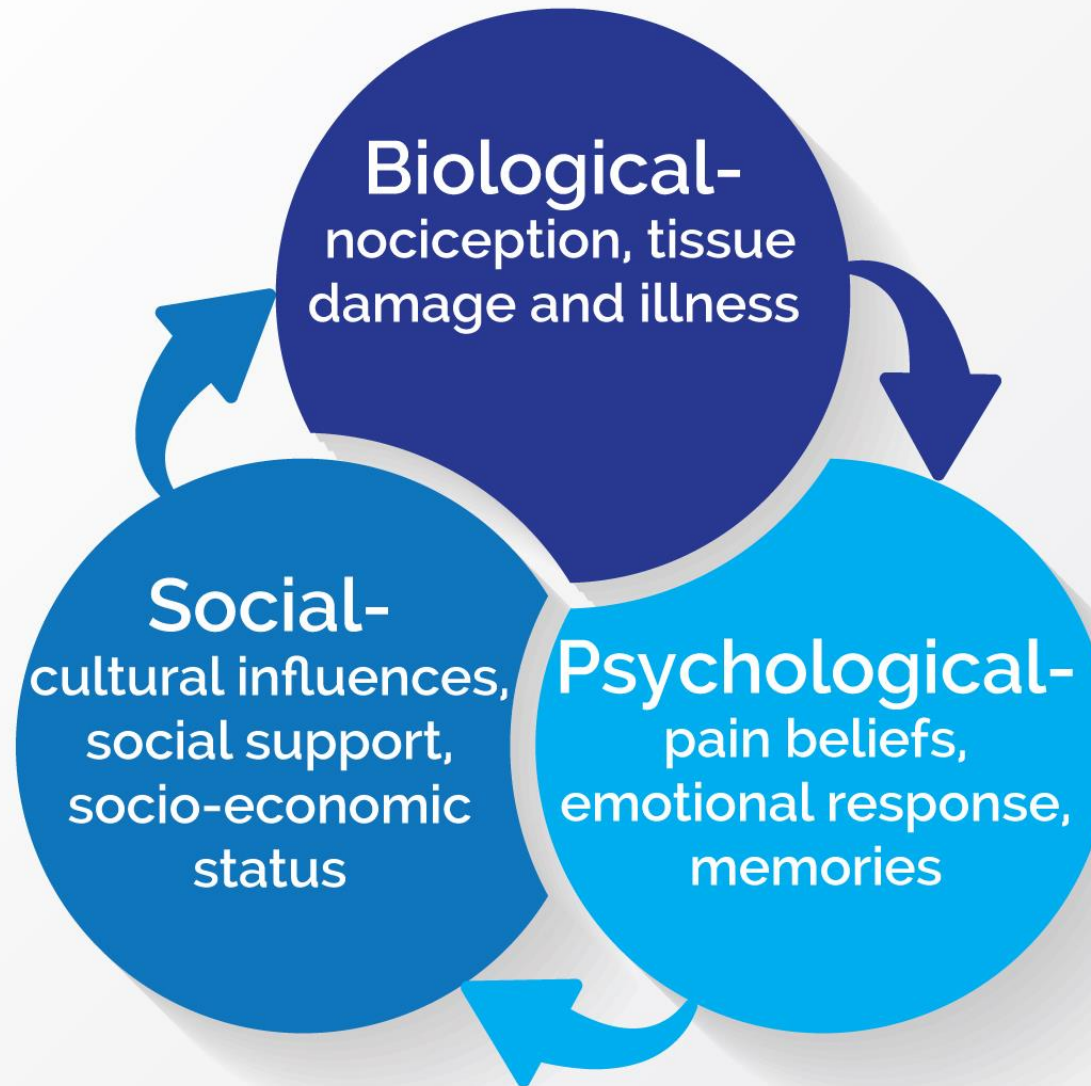
- ✓ Analgesics
- ✓ NSAIDS
- ✓ Muscle relaxants

Summary of Recent Evidence for OTCs and Muscle Relaxants

Drug	Effect on Pain	Evidence	Strength of Evidence	Author
Acetaminophen	No effect	1 RCT	Low	Chou 2017 
Skeletal Muscle Relaxants	<i>Pain Relief</i> RR 1.72 (95% CI 1.32-2.22) at 5-7 days <i>CNS events</i> RR, 2.04 [95% CI, 1.23 to 3.37]; <i>I</i> ₂ = 50%)	1 SR (4 RCTs), 1, RCT	Moderate	
NSAIDS	No clinically sig effect short term (NNT=6) Minimal clinically sig effect for chronic pain	Immediate Acute =6 RCTs (n=473) Chronic=12 RCTs (n=1444)	Moderate to High	Machado 2017 



Biopsychosocial model of pain





2017/2018 Guideline Consensus on Treating LBP



Summary:

- ✓ Approach management from a multidisciplinary biopsychosocial framework (including risk stratification)
- ✓ Educate patient about pain
- ✓ Keep person active and working
- ✓ Only use imaging if it will change management
- ✓ 1st choice of therapy should be non-pharmacological
- ✓ Manual therapy and psychological approaches should be used in conjunction with a treatment program including exercise

2017/2018 Guideline Consensus on Treating LBP



Summary:

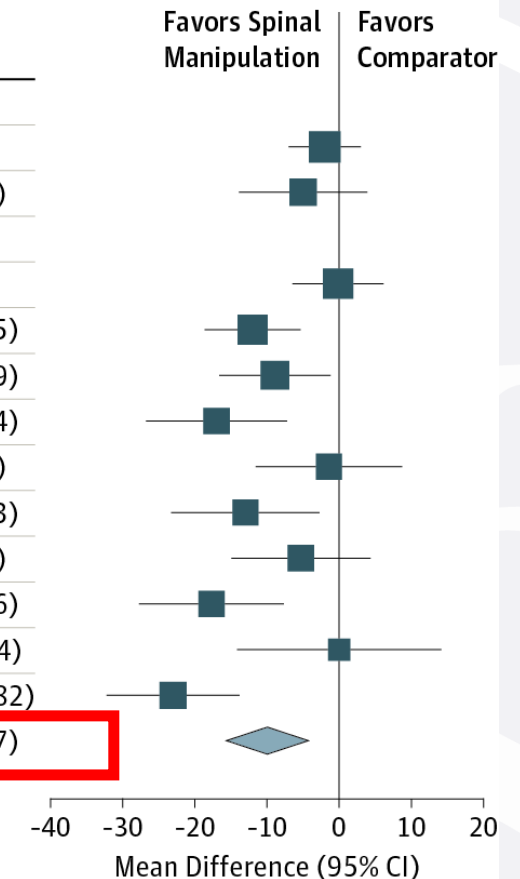
- ✓ Acute LBP- superficial heat, massage, acupuncture, or **spinal manipulation**
- ✓ Chronic LBP- exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction, tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low-level laser therapy, operant therapy, cognitive behavioral therapy, or **spinal manipulation**
- ✓ Limit or avoid electro modalities like US, TENS and EMS and lumbar traction
- ✓ Consider NSAIDS and spinal muscle relaxants (accounting for pt preferences and risks)
- ✓ Consider weak opioids only when other conservative pharmacological management has failed
- ✓ Avoid surgery and invasive spinal procedures (unless conservative management fails)

Association of Spinal Manipulative Therapy With Clinical Benefit and Harm for Acute Low Back Pain: Systematic Review and Meta-analysis

JAMA. 2017;317(14):1451-1460. doi:10.1001/jama.2017.3086

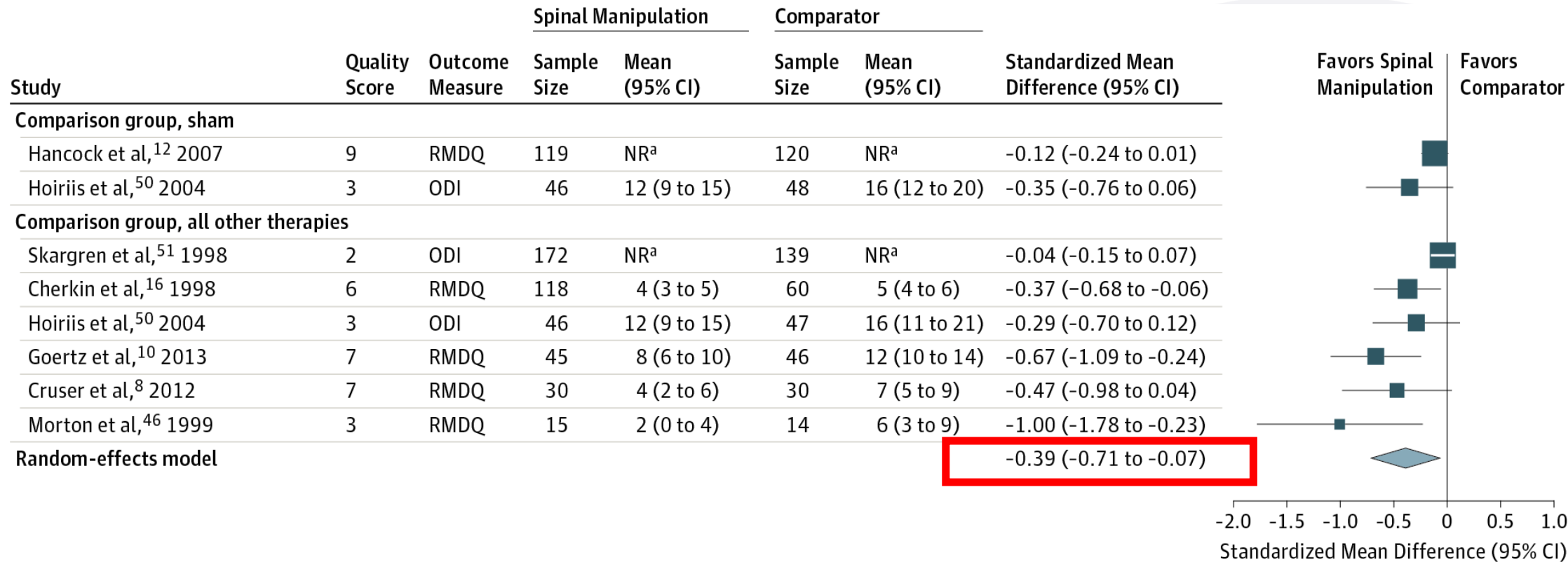
Pain

Study	Quality Score	Outcome Measure	Spinal Manipulation		Comparator		Mean Difference (95% CI)
			Sample Size	Mean (95% CI)	Sample Size	Mean (95% CI)	
Comparison group, sham							
Hancock et al, ¹² 2007	9	ONRS	119	NR ^a	120	NR ^a	-2.00 (-7.00 to 3.00)
Hoiriis et al, ⁵⁰ 2004	3	VAS	34	17 (11 to 23)	40	22 (16 to 28)	-5.00 (-13.89 to 3.89)
Comparison group, all other therapies							
Skargren et al, ⁵¹ 1998	2	VAS	172	NR ^a	139	NR ^a	-0.16 (-6.47 to 6.15)
Cherkin et al, ¹⁶ 1998	6	ONRS	118	19 (16 to 22)	60	31 (25 to 37)	-12.00 (-18.65 to -5.35)
Grunnesjö et al, ³⁵ 2004	7	ONRS	89	21 (16 to 26)	71	30 (24 to 36)	-8.90 (-16.61 to -1.19)
Blomberg et al, ^{31, 34, 59-61} 1994	6	ONRS	53	17 (10 to 24)	48	34 (27 to 41)	-17.00 (-26.76 to -7.24)
Bergquist-Ullman et al, ³⁸ 1977	2	ONRS	50	30 (23 to 37)	44	31 (24 to 38)	-1.43 (-11.57 to 8.71)
Goertz et al, ¹⁰ 2013	7	NRS	45	39 (32 to 46)	46	52 (45 to 59)	-13.00 (-23.27 to -2.73)
Hoiriis et al, ⁵⁰ 2004	3	VAS	34	17 (11 to 23)	36	22 (15 to 29)	-5.30 (-14.94 to 4.34)
Cruser et al, ⁸ 2012	7	VAS	30	20 (15 to 25)	30	37 (28 to 46)	-17.70 (-27.74 to -7.66)
Farrell et al, ⁴⁸ 1982	3	ONRS	24	3 (-7 to 13)	24	3 (-7 to 13)	0 (-14.14 to 14.14)
Morton et al, ⁴⁶ 1999	3	VAS	15	2 (0 to 4)	14	25 (16 to 34)	-23.03 (-32.24 to -13.82)
Random-effects model							-9.95 (-15.63 to -4.27)



Association of Spinal Manipulative Therapy With Clinical Benefit and Harm for Acute Low Back Pain: Systematic Review and Meta-analysis

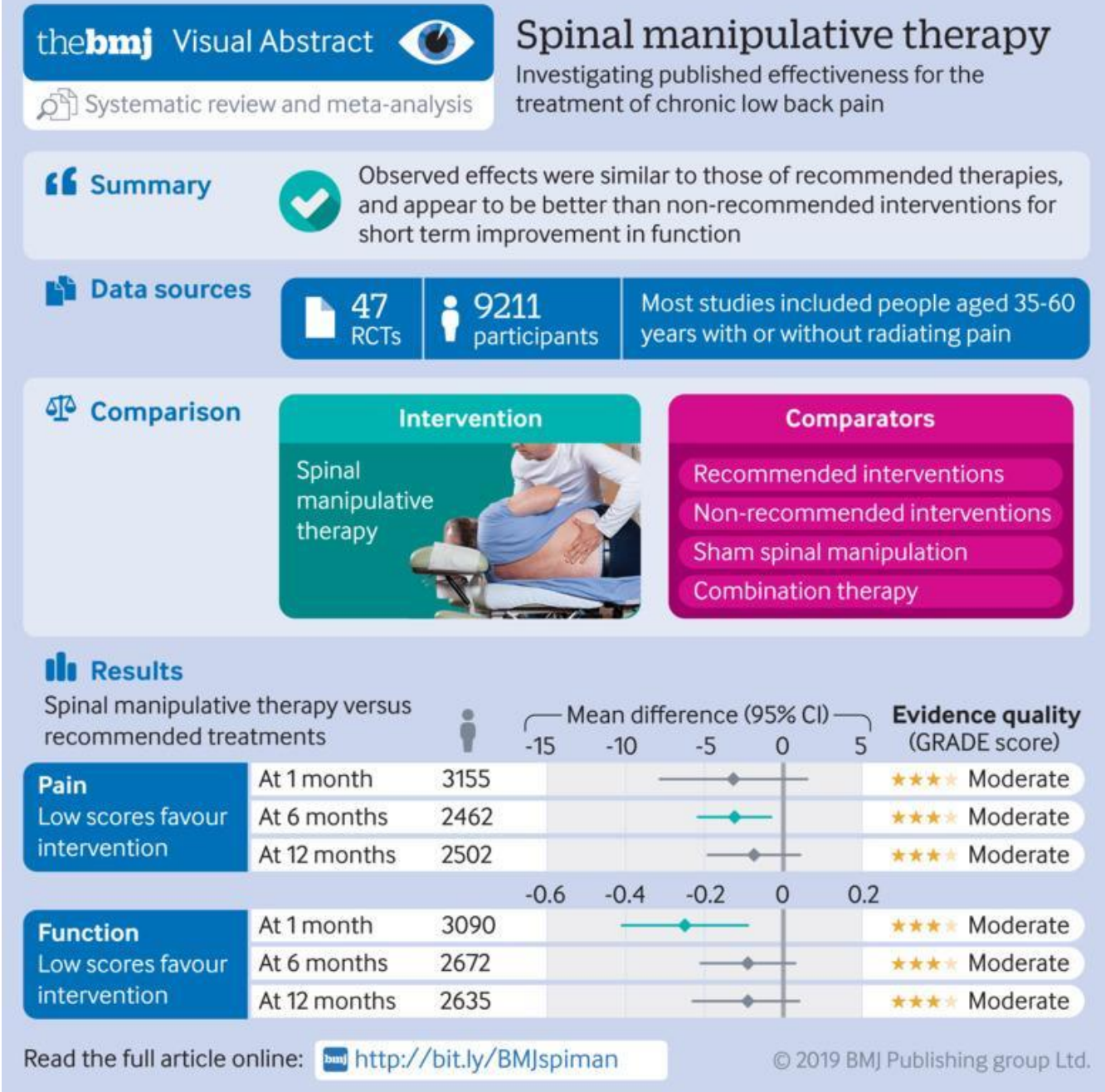
JAMA. 2017;317(14):1451-1460. doi:10.1001/jama.2017.3086



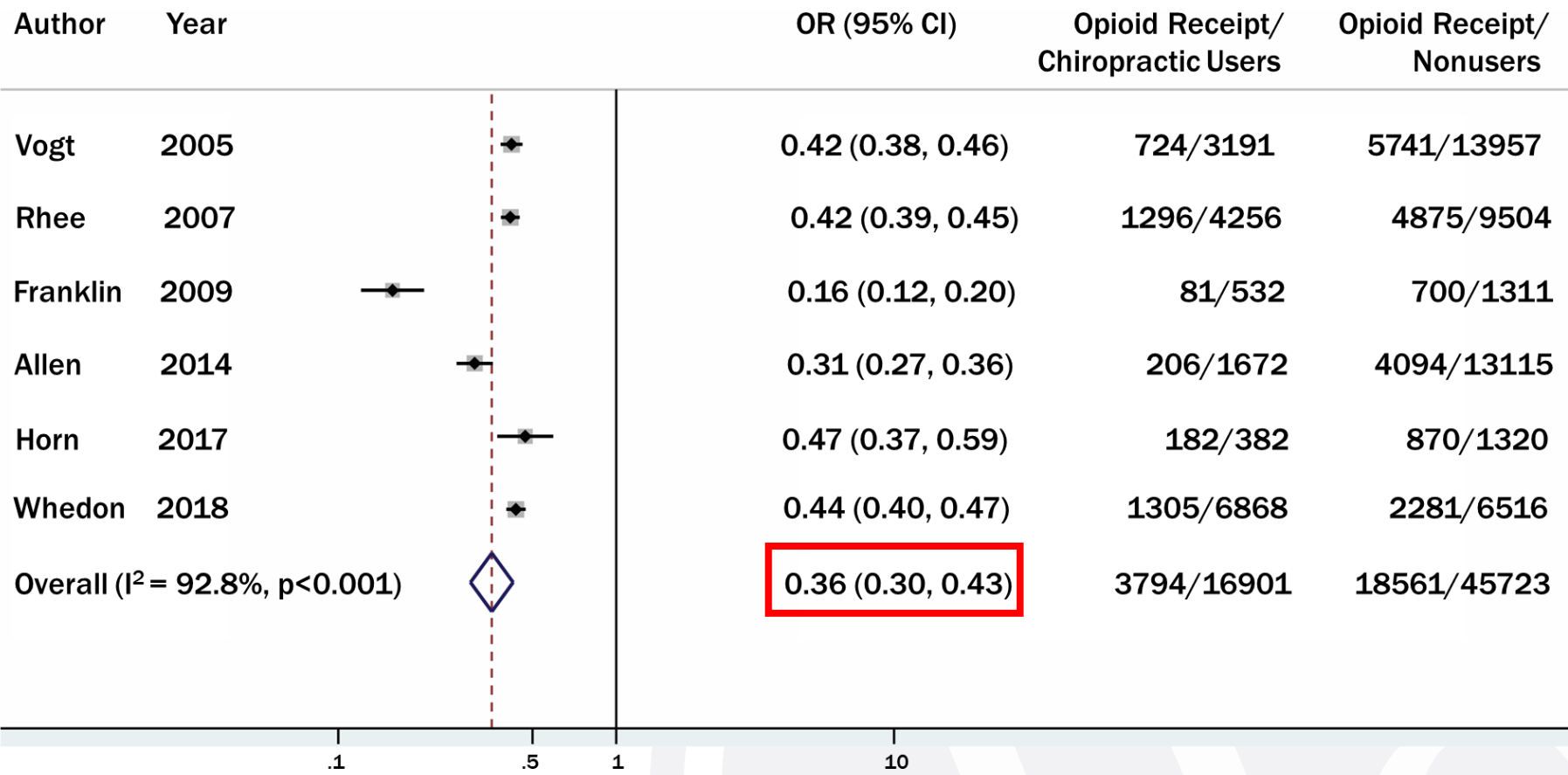
Function



2019-Benefits and Harms of Spinal Manipulative Therapy for the Treatment of Chronic Low Back Pain: Systematic Review and Meta-analysis of Randomized Controlled Trials



2019- Association Between Chiropractic Use and Opioid Receipt Among Patients with Spinal Pain: A Systematic Review and Meta-Analysis



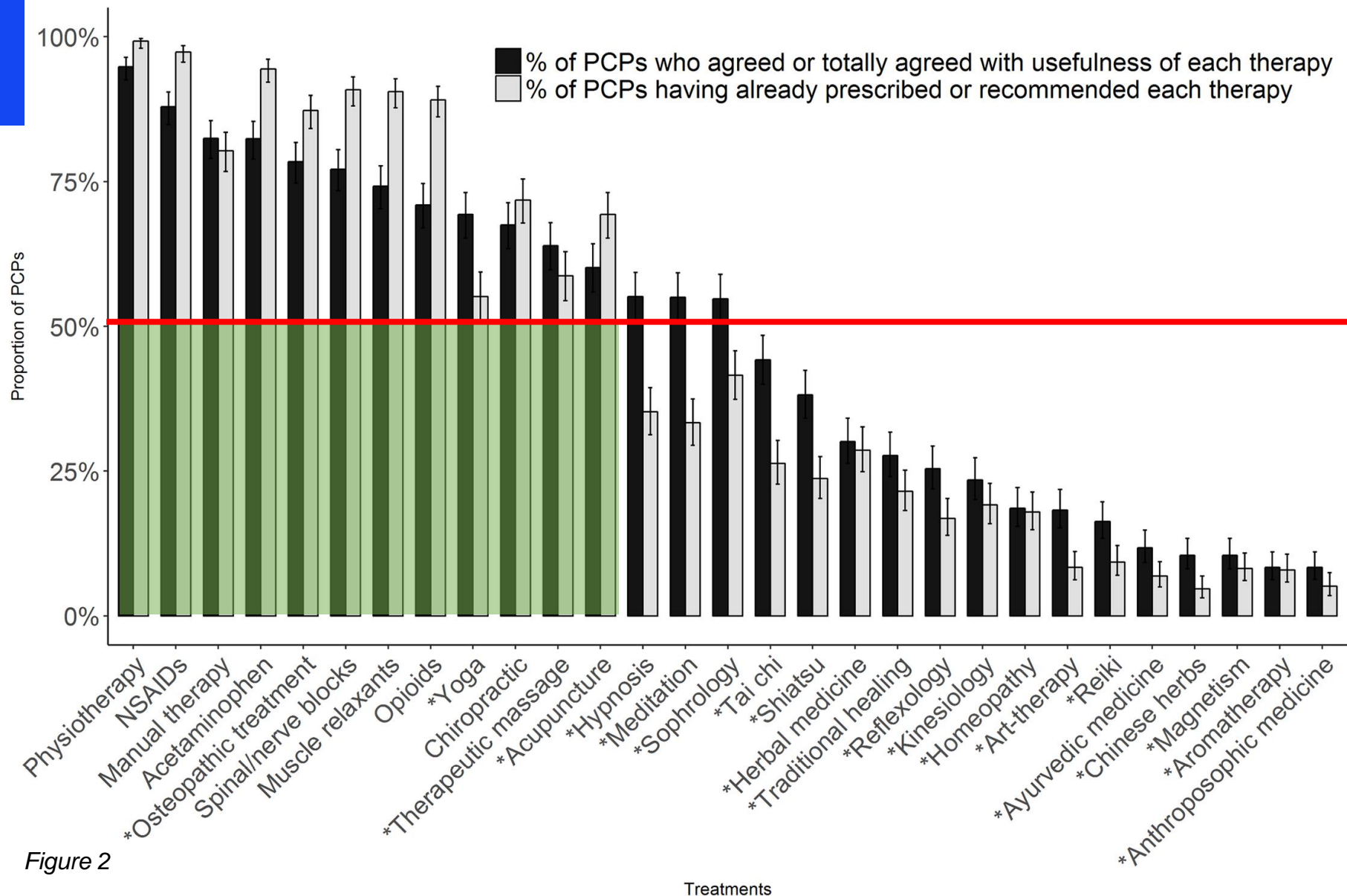
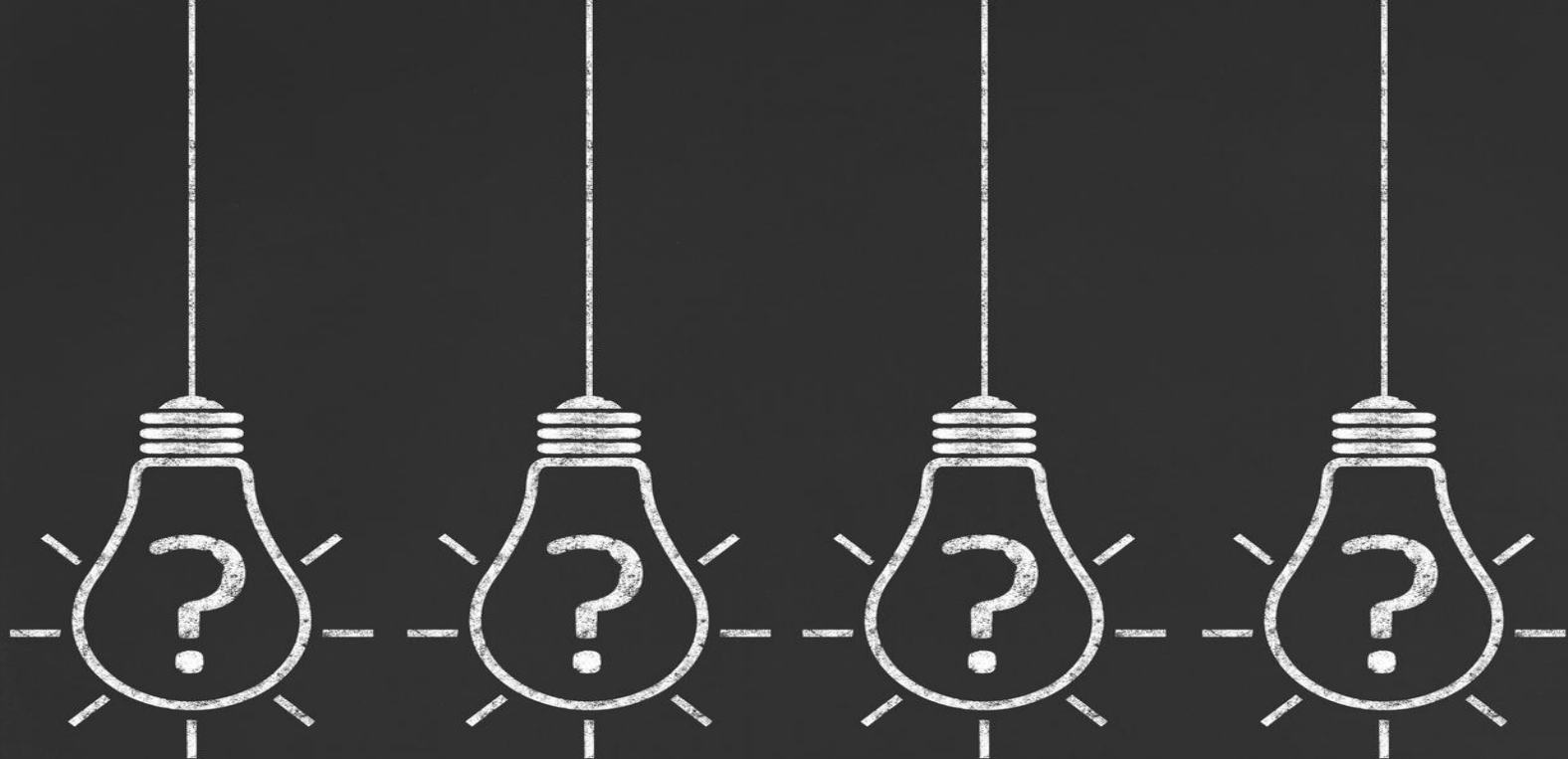


Figure 2



VA



U.S. Department
of Veterans Affairs



Veteran's Affairs

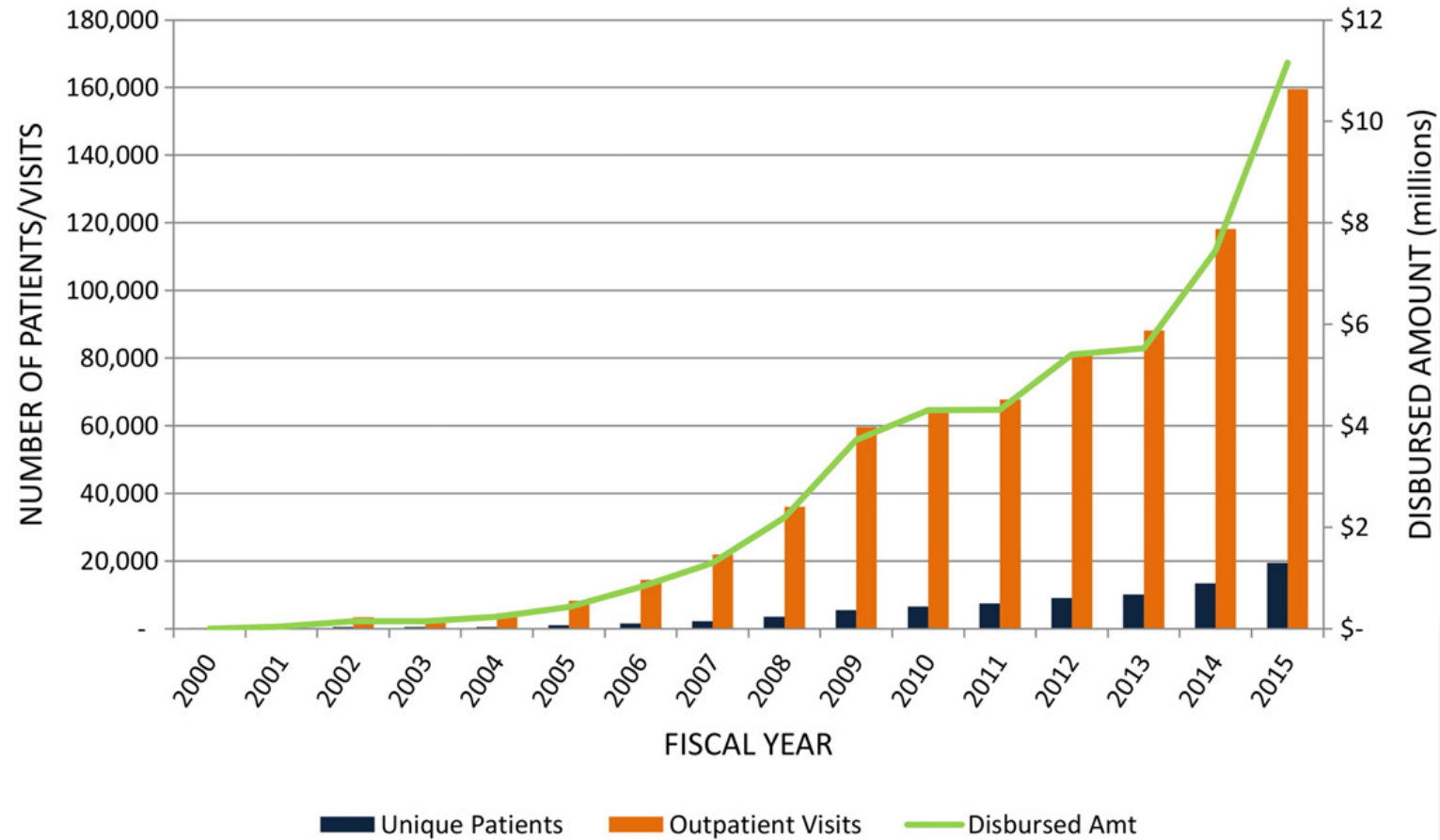
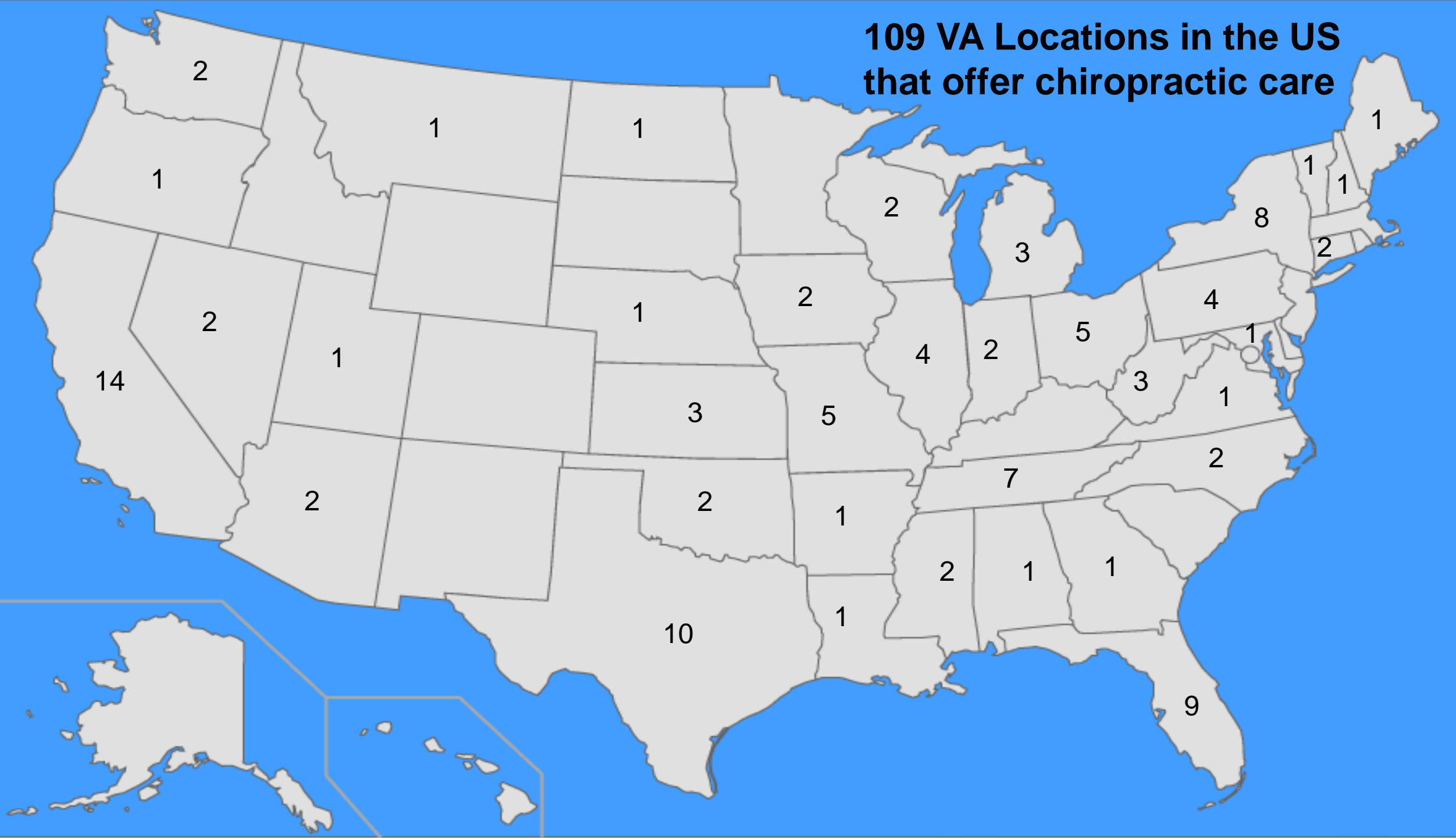
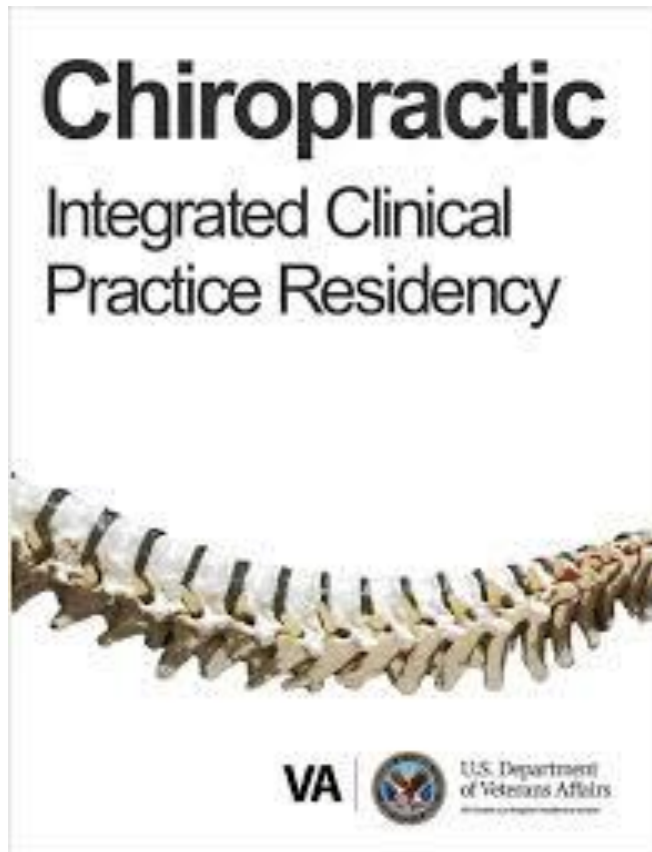


Fig 3. Total number of unique VA patients receiving purchased chiropractic care outside of VA, total number of those visits, and total dollar amount disbursed for purchased chiropractic services.

109 VA Locations in the US that offer chiropractic care





Preceptorships and Residencies available
for end of program and post graduates

Integrated Clinical Practice



Patient Care ~1,250 hrs (66%)

- Mentored by senior VA DCs
- Team-based collaborative management, including highly complex cases



Interdisciplinary Rotations ~320 hrs (17%)

- Including primary care, medical/surgical specialties, mental health specialties, rehabilitation disciplines



Scholarly Activities ~320 hrs (17%)

- Individual and group didactic content and projects
- Attend/give presentations; teach/assess DC students

Aim

- To provide graduate DCs with advanced training and experiences relevant to careers in hospitals, integrated medical systems, and/or academia

Details

- Full-time, 1-year program
- \$40k average annual stipend
- Paid time off Holidays and vacation
- Eligible for life and health insurance
- Open to US citizens only

Residents report high satisfaction with the program. Medical specialists report very favorable perception of residents' competence and value.

DC Residents

“This was life changing for me”
(Resident, Class of 2015)

“This opportunity...has truly unlocked the unlimited potential of my chiropractic education and training” *(Resident, Class of 2016)*

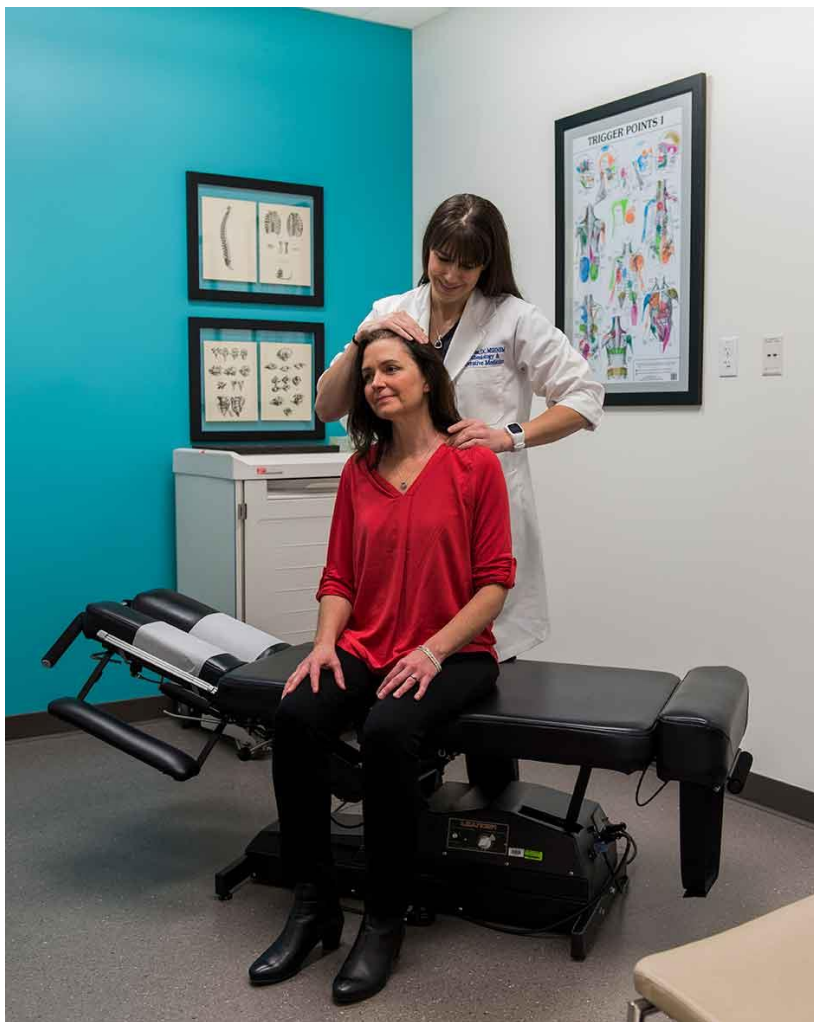
“This residency has had such a powerful impact on my career which has exceeded my expectations” *(Resident, Class of 2017)*

MD Attendings

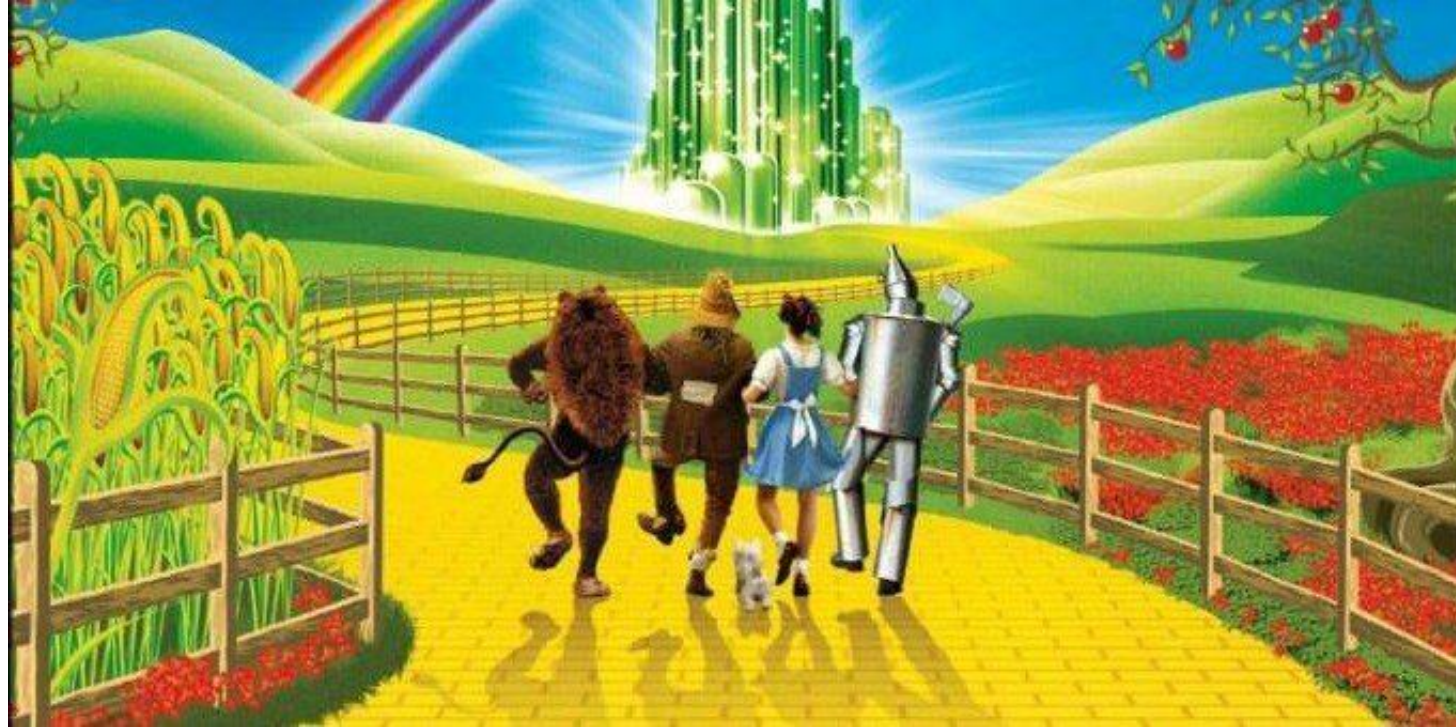
“His history and exam was on par with a mid level neurosurgery fellow” *(VA Neurosurgeon)*

“I had her teach the low back exam to my med students” *(VA Primary care physician)*

“I wish we could hire him right now” *(VA Physiatrist)*



OHSU Comprehensive Pain Center



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